

Thorax: Black except as otherwise noted; pronotum with long pale hairs, roughened by shallow almost confluent punctures; prescutum finely and rather evenly punctured, punctures in the posterior angle very faint; tegulae brownish to black, without punctures; scutum finely and rather evenly punctured, the punctures anteriorly and at sides most distinct; mesoscutellar plate practically unpunctured except for a few fine punctures posteriorly, anterior angle about a right angle and the length of the plate about equal to the width, the posterior margin rounded and somewhat produced medianly; metanotum black and with the metascutellar plate unpunctured; legs with coxae blackish, trochanters mostly dark, remainder of legs yellow; wings hyaline, almost clear, somewhat iridescent, veins brown.

Abdomen: Tergites black to the ninth which varies from black to brownish, basal plates somewhat punctured; genitalia yellowish brown; sternites and pleurum of the tergites dark brownish to blackish and punctured, hypandrium blackish and evenly punctured.

*Type locality*.—West Yellowstone, Montana.

Described from 20 females (one type) and 27 males (one allotype) from the type locality. The material was collected June 6, 1925, and the larvae fed upon *Pinus contorta*.

*Type, allotype, and paratypes*.—Cat. No. 43469 U. S. N. M. All are deposited in the National Museum collection at Washington, D. C.

This species is named in honor of Dr. H. E. Burke, who collected the specimens.

---

## NEW AND LITTLE-KNOWN DIAPRIIDAE FROM BRITISH COLUMBIA (HYMENOPTERA).

By OSCAR WHITTAKER.

The following descriptions and notes are made from material collected in western British Columbia by the writer. Except where otherwise stated all this material remains in the writer's collection.

### BELYTA Jurine.

Of this genus I have taken five species, four of which are described below as new, and as far as can be ascertained no other species of the genus have been recorded from this province before.

#### *Belyta longicollis*, Fouts.

I have taken both sexes of this species at Hollyburn on various dates between 7 July and 24 October, 1928-30. I am indebted to my friend Mr. Robert M. Fouts for kindly comparing several of my specimens with the type. The type

material consists of a single female from Pennsylvania. The male is now described for the first time.

*Male*.—Coloration as in the female, the flagellum somewhat darker. Head globular, ocelli in an equilateral triangle, lateral ocelli nearer together than to the eyes; the occiput with a carina surrounding the neck. Antennae a little longer than head, thorax and petiole combined; scape about four and one-half times as long as thick, as long as joints 3 and 4 combined; pedicel subglobular, a little longer than thick; joint 3 nearly three times as long as pedicel, two and one-half times as long as thick, moderately excised on basal half, the side opposite the excision curved; joint 4 two-thirds as long as joint 3, about twice as long as thick; joints 4-13 gradually shorter; joint 13 about three-quarters as long as joint 4; apical joint conic-ovate; nearly one and one-half times as long as preceding joint. Thorax twice as long as wide. Pronotum, seen from above, wider than usual in this genus, gradually narrowed anteriorly (not bulging out in front of tegulae, as in the female), the sides almost straight, anteriorly rugoso-punctate, with a deep median depression, the sides smooth, the neck longitudinally sulcate. Forewings two and one-quarter times as long as their greatest width. Abdomen, including petiole, longer than head and thorax combined; exclusive of petiole, a little more than twice as long as wide.

An examination of twelve males and six females shows this to be a somewhat variable species. The dorsum of the propodeum in both sexes may be almost smooth with only a very slight irregularity of surface or, more often, with distinct, irregular, transverse, raised lines. The median carina of the propodeum in one female is bifurcate for only one-quarter its length, while in two males it is bifurcate for nearly its entire length. The petiole in one female is only one and three-quarter times as long as wide. The length varies in the male from 2.7 to 3.5 mm. and in the female from 3.5 to 4.0 mm.

#### *Belyta sanguinea*, new species.

*Female (Type)*.—Head, thorax and petiole black; scape black, the radicle and apex yellowish, pedicel and flagellum yellowish-red, apical joint dark brown; legs, including coxae, reddish-yellow, base of hind coxae blackish; basal two-thirds of second tergite reddish, rest of abdomen brown; wings faintly fumose; tegulae and venation brown. Head smooth and shining, rounded behind the eyes, as wide as long; eyes remote from occiput; ocelli in an equilateral triangle, lateral ocelli slightly nearer together than to eyes, twice as far from the occiput as from one another. Antennae with long, pale pubescence, flagellum proximally submoniliform, becoming moniliform distally, almost as long as head, thorax and petiole combined; scape four times as long as thick, as long as following four joints combined; pedicel short, less than one-quarter as long as scape, slightly longer than joint 4; joint 3 about one and one-half times as long as pedicel and about one and one-half times as long as thick, thickest at the apex; joint 4 about as thick as long; following joints about as long as joint 4, becoming gradually thicker; joint 14 very slightly thicker than long; apical joint as long as joint 3, one and one-half times as long as thick; flagellum three times as long as scape. Thorax about twice as long as wide. Pronotum short, produced in a short, irregularly, sulcate neck. Mesonotum wider than long, flat, with distinct, per-

current notauli. Scutellum flat, basal fovea transverse, shallow. Propodeum with the dorsum smooth but somewhat uneven, hind margin straight, carinate, the median carina bifurcate for more than half its length. Forewings narrow, about three times as long as their greatest width; first abscissa of radius oblique, much shorter than marginal vein; radial cell one and one-half times as long as marginal vein; cubitus, discoideus and brachius present as faint, fuscous streaks; cubitus short, straight, directed towards the basal nervure. Petiole a little less than one and one-half times as long as wide, widest at the hind margin; front margin feebly sinuous, the sides almost straight, hind margin straight, longitudinally striate, feebly rugulose between the striations. Abdomen highly polished, somewhat depressed, elongate oval; including petiole, as long as head and thorax combined; exclusive of petiole, twice as long as wide; second tergite with a few, very short striae at the base, slightly less than one and one-half times as long as wide, about two and one-quarter times as long as rest of abdomen; following tergites very short, the last longer. Dorsum of mesonotum and scutellum and sides of these, propodeum and petiole with long, scattered, pale hairs.

*Male (Allotype).*—Similar to female but differing as follows. Antennae blackish-brown, except apical half of scape, base of pedicel and basal half of joint 3, which are reddish; legs slightly darker than in the female, the tarsi, except basally, inclining to brown; venation also darker than in female. Head a little more than one and one-half times as wide as long. Antennae slender, filiform, pubescent, longer than head, thorax and petiole combined; scape slightly more than four times as long as thick, a little longer than joint 3; pedicel globular; joint 3 excised on basal half, three times as long as its greatest width; joint 4 about two and one-half times as long as thick, as long as joint 3; following joints gradually shorter; joint 13 twice as long as thick and two-thirds as long as joint 4; apical joint as long as joint 4. Petiole two and one-half times as long as wide, sides almost straight, hind margin slightly wider than front margin, with two fine, longitudinal striae on dorsum and two lateral striae visible from above. Forewings with the radial cell twice as long as the marginal nervure; first abscissa of radius oblique, shorter than marginal nervure. Abdomen, including petiole, about as long as head and thorax combined; exclusive of petiole, twice as long as wide; second tergite one and one-half times as long as wide, four times as long as rest of abdomen.

*Length*, 3.0–3.6 mm; *expanse*, 4.2–6.5 mm.

Described from one male, 3rd September, 1929, and six females, 24th August to 19th October, 1930, taken at Hollyburn.

*Variation.*—The color varies slightly in depth and one specimen has the penultimate as well as the apical flagellar joint dark brown. Two females have the petiole dorsally smooth and in one female the median carina of the propodeum is almost obsolete, its position beyond the basal portion being indicated by an elongate, triangular, smooth, raised area; the posterior marginal carina is almost obsolete.

Paratypes sent to the U. S. N. M., Dr. A. A. Ogloblin and Mr. Robert M. Fouts.

**Belyta boreale**, new species.

*Female*.—Black, shining; scape and pedicel brown, flagellum darker brown, legs brownish-yellow, hind coxae, except apically, dark brown; wings faintly fumose; tegulae and venation brown. Head nearly one and one-half times as wide as long, rounded behind the eyes; ocelli in a triangle with a depression before front ocellus and external to the lateral ocelli; lateral ocelli about as far apart as from the eyes. Antennae pubescent, moniliform beyond joint 4, as long as head, thorax and petiole combined; scape robust, about four times as long as thick, one-third as long as rest of antenna, as long as following four joints combined; pedicel one and one-half times as long as thick; joint 3 two and one-half times as long as thick, one and one-half times as long as pedicel, as long as joints 4 and 5 combined; joint 4 very slightly longer than joint 5; joints 5-14 subequal, joint 14 very slightly thicker than long, one-half as long as joint 3; apical joint conic-ovate, one and one-half times as long as thick. Thorax about one and three-quarter times as long as wide. Pronotum short, produced in a stout, sulcate neck. Mesonotum somewhat convex, with distinct percurrent notauli; scutellum with a shallow, transverse, basal fovea. Propodeum smooth and shining; the hind margin nearly straight; median carina bifurcate for one-quarter its entire length. Head and thorax with long, fairly dense, pale hairs. Forewings broad, about twice as long as their greatest width; first abscissa of radius somewhat oblique, nearly as long as marginal nervure; radial cell three times as long as marginal nervure; cubitus, discoideus and brachius present as faint fuscous streaks, the cubitus straight, directed towards the basal nervure. Petiole one and one-half times as long as wide, front and hind margins straight, the sides feebly sinuous, hind margin a little longer than front margin, dorsum and sides longitudinally rugoso-striate. Abdomen highly polished, convex; including petiole, about as long as head and thorax combined, exclusive of petiole, oval, about one and three-quarters times as long as wide; second tergite about one and one-third times as long as wide, three times as long as rest of abdomen, longitudinally striate at base, the median sulcus not conspicuously longer than the others, shorter than hind margin of petiole; segments 3-6 gradually shorter; 6 one-half as long as 3; 7 slightly longer than 3. Petiole and abdomen with long, pale hairs, longest on sides of petiole, scattered on dorsum of second tergite, closer on sides and on following segments, except in the centre.

*Length*, 2.5-2.8 mm; *expanse*, 4.8 mm.

Described from three females taken at Hollyburn, 25 August, 1928, 30 September, 1929, and 10 October, 1930.

Paratype sent to Mr. Robert M. Fouts.

In one paratype the antennae are paler than in the type.

**Belyta anthracina**, new species.

*Female*.—Black, shining; antennae dark brown; scape, except apex, black; legs yellowish-brown, base of hind coxae dark brown; wings faintly fumose, tegulae and venation brown. Head smooth and polished, as long as wide, rounded behind eyes, occiput surrounded by a carina; ocelli in an equilateral triangle, lateral ocelli nearer together than to the eyes, twice as far from occiput as from each other. Antennae robust, pubescent, moniliform, nearly as long as

head, thorax and petiole combined; scape one-third as long as rest of antenna, about four times as long as thick, as long as following four joints combined; pedicel one and one-third times as long as thick; joint 4 slightly longer than pedicel, one and one-half times as long as thick, as long as following two joints combined; joints 5-14 subequal, joint 5 as long as thick, joint 14 very slightly thicker than long, only very slightly longer and thicker than joint 5; apical joint ovate, one and one-half times as long as thick, one and one-half times as long as preceding joint. Pronotum laterally very narrow, with a few shallow punctures in front, the median one larger and deeper, produced in a broad, longitudinally sulcate neck. Mesonotum and scutellum flat; mesonotum with deep, percurrent notauli; scutellum with a shallow, transverse, basal fovea. Propodeum with the median carina fine, bifurcate for more than one-half its length; the dorsum smooth, rugulose between the branches of the median carina and along the lateral carinae and hind margin; hind margin almost straight, carinate, the hind angles not produced. Forewings about two and one-half times as long as their greatest width; first abscissa of radius oblique, shorter than the marginal nervure, radial cell nearly twice as long as marginal nervure; cubitus, discoideus and brachius present as faint, fuscous streaks, the cubitus almost obsolete, directed towards the basal nervure. Petiole cylindrical, twice as long as wide, front margin slightly emarginate, hind margin and sides straight, the dorsum feebly rugulose, with inconspicuous, longitudinal striations which are obsolete in the middle. Abdomen highly polished, convex; including petiole, as long as head and thorax combined; exclusive of petiole, a little more than twice as long as wide; second tergite one and two-fifths as long as wide, about three times as long as rest of abdomen, with short striae at the base, the median sulcus much longer than the others, extending for two-fifths the length of the tergite, about as long as petiole; tergites 3 to 5 about equal, the sixth about as long as 4 and 5 combined; the seventh about equal to the sixth; the entire body with scattered, long, pale hairs.

*Length*, 3.1 mm.; *expanse*, 4-8 mm.

Described from a single specimen taken at Hollyburn, 15 June, 1930.

#### *Belyta excavata*, new species.

*Female*.—Black, shining, antennae brownish-yellow, becoming darker on the apical half; legs brownish-yellow, base of hind coxae dark brown; wings faintly fumose, tegulae and venation brown. Head as wide as long, rounded behind eyes, occiput surrounded by a fine carina; ocelli in a triangle, lateral ocelli nearer together than to eyes or occiput. Antennae as long as head and thorax combined; flagellum proximally filiform, distally moniliform; scape robust, a little less than four times as long as thick, as long as following five joints combined; pedicel about one-quarter as long as scape, slightly longer than thick; joint 3 a little longer than pedicel; joint 4 slightly more than one-half as long as joint 3; following joints very gradually longer; joint 14 one and one-half times as long as joint 4, slightly thicker than long; apical joint conic-ovate, one and one-half times as long as preceding joint and one and one-half times as long as thick. Thorax twice as long as wide, somewhat flattened. Pronotum short,

produced in a short, stout neck. Mesonotum with distinct, percurrent notauli; basal forea of scutellum shallow. Propodeum with the hind margin deeply emarginate, straight in the centre, the hind angles considerably produced; median carina bifurcate for nearly its entire length, dorsal areas smooth, laterally and posteriorly with irregular, punctate depressions. Forewings narrow, nearly three times as long as their greatest width; first abscissa of radius very oblique, about one-half as long as marginal nervure, second abscissa of radius short, continued as a very faint, hardly visible, fuscous streak to the costal margin, the enclosed area about as long as marginal nervure; cubitus, discoideus and brachius present as very faint, fuscous streaks, the cubitus directed towards the discoideus. Petiole one and one-half times as long as wide; front and hind margins straight, the latter considerably longer than the former, sides convex; irregularly, longitudinally striate, the surface between the striae somewhat uneven. Abdomen, including petiole, as long as head and thorax combined; exclusive of petiole elongate-oval, twice as long as wide; second tergite one and one-half times as long as wide, four times as long as rest of abdomen, base shortly striate, the median sulcus extending for about one-sixth the length of the tergite; segments 3-5 about equal, sixth segment longer. Entire body with scattered, pale hairs, sparsest on dorsum of second tergite.

*Length*, 3.5 mm.; *expanse*, 4.5 mm.

Described from five females taken at Hollyburn on various dates between 6 June and 2 October, 1929-30.

Paratype sent to Mr. R. M. Fouts.

*Variation*.—The antennae may have the basal half of the scape dark brown and the flagellum darker than in the type, the apical joints being very dark. The length varies from 2.75-3.5 mm. and the expanse from 4.0-5.5 mm.

#### PROPSILOMMA Foerster.

*Propsilomma columbianum*, Ashmead.

(= *Psilomma columbianum*, Ashm.)

I have taken a couple of males of this species, one at Hollyburn, 18 July, 1929, and one at Galiano, 24 June, 1930.

#### DIPHORA Foerster.

*Diphora nearctica*, Whitt.

(*Proc. Ent. Soc. Wash.*, Vol. 32, p. 74.)

The type material is stated to contain both sexes. This is an unfortunate error, as they are all females. I was misled through mistaking the peculiar ovipositor (which is short and bent into a hook at the apex) for the uncus. In working through my collection I have found twelve specimens which are undoubtedly males of this species. It is possible that this genus is synonymous with *Pantoclis* Foerster.

*Male*.—In color and general appearance similar to the female. Antennae slender, filiform, longer than the entire body; scape four times as long as thick; pedicel globular; joint 3 as long as scape, four times as long as thick, excised, but not deeply, on basal one-fourth; joint 4 shorter than joint 3; joints 3–13 gradually shorter; joint 13 two-thirds as long as joint 4; apical joint about one and one-fourth times as long as preceding joint. Petiole one and one-third times as long as wide. Abdomen, including petiole, about as long as head and thorax combined; exclusive of petiole, twice as long as wide; second tergite one and one-half times as long as wide; fourth and fifth tergites each about one-half as long as the preceding tergite.

*Length*, 2.2–2.8 mm.

Taken at Hollyburn, 11 June–20 September, 1928–30.

---

## SEASONAL HISTORY AND MORPHOLOGICAL NOTES ON *POLYSCELIS MODESTUS* GAHAN.

By C. C. HILL AND H. D. SMITH,

*U. S. Bureau of Entomology, Cereal and Forage Insect Investigations.*

### INTRODUCTION.

The general life history of this species was published by P. R. Myers<sup>1</sup> in 1924. At that time, it was thought to be a rare parasite of the Hessian fly, but in 1928 it was found by the authors to be parasitizing, in considerable numbers, the fall generation of the Hessian fly during the very early spring days. It is the purpose of this paper to call attention to this latter occurrence and also to present some additional morphological details which were lacking in the earlier account by Myers.

### EXTENT OF PARASITISM.

In the spring of 1928 adults of *Polyscelis modestus* were found in two wheat fields that were heavily infested with the Hessian fly. One was located near Carlisle, Pa., and the other about 8 miles south of Carlisle near Mt. Holly Springs, Pa. On May 7, by which time the period of oviposition of *P. modestus* was past, a sample of 100 Hessian fly puparia was secured from the field at Mt. Holly Springs, and dissection showed 33 per cent of them to be parasitized by *P. modestus*.

### OVIPOSITION.

Hessian fly puparia containing both larval and pupal stages were found to be parasitized indiscriminately. As the season advanced, pupae in all stages of development were found which

---

<sup>1</sup>Jour. Agr. Research, Vol. XXIX, No. 6, p. 289–295, 1924.